Rationales for Mercury MDVs in Oregon and Michigan	Option 1	Option 2
131.10(g) Factor Used to Justify Variance	(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied (during the term of the variance)	(3) Human caused conditions or sources of pollution prevent the attainment of the use and … would cause more environmental damage to correct than to leave in place (during the term of the variance)
Justification of Selected Factor	**Ex. 5 Deliberative Process (DP)**	
Selected HAC	(3) If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a	(3) If no additional feasible pollutant control technology can be identified, the interim criterion or interim effluent condition that reflects the greatest pollutant reduction achievable with the pollutant control technologies installed at the time the State adopts the WQS variance, and the adoption and implementation of a

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	Pollutant Minimization Program.	Pollutant Minimization Program.
Justification of Selected HAC	**Ex. 5 Deliberative Process (DP)**	

Ex. 5 Deliberative Process (DP)

- Variances that extend longer than three years are traditionally revisited in the context of a triennial review. Once a variance has expired, to justify the continuation of the variance, the state must demonstrate that meeting the standard is still unattainable based on one of the factors at 131.10(g). The state should also ensure that the permittee has made reasonable progress to control mercury in the discharge during the period of the previously approved variance (i.e. has adopted a mercury minimization plan.) (Page 46, PDF page 60)
- *Mercury Minimization Plans (MMPs).* EPA recommends that states and authorized tribes require dischargers receiving a variance to adopt and implement an MMP as described in section 7.5.2.4. By reducing mercury sources up front, as opposed to traditional reliance on treatment at the end of a pipe, diligent implementation of MMPs might mitigate any adverse effects of a variance by improving the water quality. As noted above, MMPs also serve to inform the evaluation of controls needed to grant a variance and to determine the highest attainable water quality (Page 46, PDF page 60)
- EPA believes that mercury reductions achieved through implementing MMPs tailored to the facility's potential to discharge mercury could result in important reductions in mercury loadings. EPA's basis for this conclusion is its study of pollutant minimization programs and their success in reducing mercury loadings to the environment. The reports *Mercury Study Report to Congress* (USEPA 1997c) and draft *Overview of P2 Approaches at POTWs* (USEPA 1999b) show that POTWs and industrial dischargers have implemented source controls, product substitution, process modification, and public education programs with great success. These minimization practices focus on sources and wastes that originate with and are under the reasonable control of a facility, not on pollutants in rainwater or source water. (Page 120, PDF page 134)
- Using pollutant minimization or prevention programs can also reduce the transfer from wastewater to other media through disposal of mercury-containing sludge from which mercury may subsequently reenter the environment. For example, mercury removed at a POTW through treatment is likely to reenter the environment through POTW sludges that are then incinerated or applied to land (although some is captured by air emission controls on incineration). EPA believes that a better approach for reducing mercury releases to the environment is to prevent mercury from entering the wastewater collection system at the source through product substitution, waste minimization or process modification, or removing and recycling mercury at

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the source (source controls) using state-of-the-art technology. These measures aimed at reducing influent loads to POTWs also reduce the use of mercury in the community, which could reduce the amount of mercury entering the environment through other media or sources. (For example, products that contain low levels of mercury may be disposed of as a nonhazardous solid waste and incinerated, releasing mercury to the air.) Where pollution prevention approaches have been implemented, substantial reductions in mercury concentrations in POTW influents, sludges, and effluents have been achieved. (Page 120, PDF page 134)

- Finally, as explained in section 2.1.1, mercury is a bioaccumulative, persistent pollutant that can cause adverse health effects. Given this fact, EPA believes that point sources that can cost-effectively reduce their mercury discharges should do so. The fact that air sources or historical contamination are likely dominant causes of impairment does not mean that point sources should not implement cost-effective, feasible pollution prevention measures to reduce their contribution of mercury to the environment, however small those contributions may be. In short, EPA believes that it is reasonable to expect NPDES permittees to implement cost-effective, feasible, and achievable measures to reduce the amount of mercury they discharge into the environment and that, depending on the particular facts, permit writers may reasonably conclude that permit limits that require such measures derive from and comply with water quality standards as required by EPA regulations at 40 CFR 122.44(d)(1)(vii)(A). (Page 121, PDF page 135)

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- To further manage mercury discharges, the permitting authority should consider including an effluent trigger level or reduction goal in an MMP. Such a trigger level or goal could be set at a level that would provide a basis for evaluating whether the mercury minimization measures or BMPs specified in the MMP are working as anticipated. The level or goal could be expressed numerically or in narrative form. For example, the MMP might provide a trigger level equal to the existing effluent quality that, if exceeded, would indicate that mercury minimization measures may not be effective. Alternately, the MMP might provide goals for mercury reductions that are expected to occur as a result of the implementation of mercury minimization efforts specified in the MMP. (Page 123, PDF page 137)
- In many cases, large-scale treatment technology is either not yet available or not economically feasible for controlling mercury at POTWs. Instead, POTWs are choosing to develop and implement pollution prevention (P2) strategies to reduce the amount of mercury received by the wastewater treatment plant. (Page 125, PDF page 139)

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